10/789536

FILE 'REGISTRY' ENTERED AT 12:10:19 ON 21 JAN 2005
L1 157 S GGGGTCAACGTTCAGGGGGG | GCATGACGTTGAGCT/SQSN

FILE 'CAPLUS' ENTERED AT 12:12:01 ON 21 JAN 2005

L2 55 S L1

L8 21 SEA ABB=ON PLU=ON L2(L)(IMMUNOMODULAT? OR IMMUNOSTIMULAT? OR IMMUNOSTIMULAT OR IMMUNORESPONS? OR (IMMUN# OR IMMUNOL?)(3A)(M ODULAT? OR STIMULAT? OR STIMULANT OR RESPONS?))

E1 THROUGH E29 ASSIGNED

Searcher : Shears 571-272-2528

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100.0%; Score 20; DB 6; Similarity 100.0%; Pred. No. 19; 20; Conservative 0; Mismatches 0; [GGGGTCAACGTTCAGGGGGG 20 [nknown. nknown. nknown. nclassified. (bases 1 to 20) rieg, A.M. mmunomodulatory oligonuclectides atent: US 6008200-A 1 28-DEC-1999; Location/Qualifiers 1. 20 /organism="unknown" /mol_type="unassigned DNA"	AR096686 20 bp DNA 1 Sequence 1 from patent US 6008200. AR096686 GI:10025701
ngth 20; [ndels		linear
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Gaps 0;		08-SEP-2000
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score 20	는 <u> </u>	- ; -	2	ID AAV27677
, μ	20	100.0	20	2	AAV27677
N	20	100.0	20	w	AAZ48834
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9	18.4	92.0		N	AAV47684
10	18.4	92.0	20	N	AAV27654
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12	18.4	92.0	20	N	AAV74245
13	18.4		20	w	AAA90449
. 14	18.4	92.0	20	4	AAH20394
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. H	18.4	92.0	20	4.	AAF98731
19	18.4	92.0	20	4	AAC80669
20	18.4	92.0	20	4	AAF59504
21	18.4	92.0		^	

AAV27641-751 represent immunostimulatory oligodeoxyribonucleotides (ODNs) of the invention. The ODNs contain at least one unmethylated CpG dinucleotide, and have the formula: 5 NNIXICGXZNZ 3', where at least one nucleotide separates consecutive CpGs, X1 is adenine, guanine, or thymine, X2 is cytosine or thymine, N is any nucleotide and N14NZ is 0-26 bases with the provision that N1 and N2 does not contain a CCGG tetramer or more than one CCG or CGG trimer OR 5' NX1XZCGX3X4N 3', where at least

New immunostimulatory nucleic acid molecules - which contain at least one unmethylated CpG dinucleotide, used for treating e.g. tumours, infections or autoimmune disease.

WPI; 1998-272127/24.

Krieg AM,

Kline JN;

Disclosure; Page 25; 109pp; English.

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Adb36892	Adb37266	Adb37069	Ach03288	Ach03105	Acd99810	Acc83113				Aal44488	Abk46517	Ab139033	Ab139032	Abs78035	Abs78283	Abs78485	Abs78484	Aaf27750	Aas09639	Aaa92361	Aaf99763	Aaf99390	Aaf99764
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ALIGNMENTS

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                                                                                                                                                                                         30-OCT-1997;
                                                                                                                                                                                                                                             Synthetic
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1. /cgn2_6/ptodata/1/ina/5A_COMB.seq:*

2. /cgn2_6/ptodata/1/ina/5B_COMB.seq:*

3. /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

4. /cgn2_6/ptodata/1/ina/FCTUS_COMB.seq:*

5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

6: /cgn2_6/ptodata/1/ina/backfIles1.seq:*
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/Cgn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
/Cgn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
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_6/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:*
_6/ptodata/1/pubpna/USO8_NEW_PUB.seq:*
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quenc	equence 12	equence 3,	equence 96	equence 96	equence 76	equence 51	equence 12	equence 12,	e 35	equence 89,	e 47,	equence 969	equence 968	e 767	equence 519	e 923	equence 740,	equence	equence 59,	e 52,	equence 969,	equence 968,	equence 767,	equence 519	equence 3,	equence	equence 968	equence 767	equence 519	equence 12,	quence 437	equence 436

RESULT 1 US-09-415-142-1

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APPLICANT: Krieg, Arthur M.
APPLICANT: Klinman, Dennis
APPLICANT: Steinberg, Alfred D.
APPLICANT: Steinberg, Alfred D.
TITLE OF INVENTION: INVINOMODULATORY OLIGONUCLEOTIDES
FILE REFERENCE: C1039/7029
CURRENT APPLICATION NUMBER: US/09/415,142
CURRENT FILING DATE: 1999-10-09
PRIOR APPLICATION NUMBER: US 08/386,063
PRIOR APPLICATION NUMBER: US 08/386,063
PRIOR FILING DATE: 1995-02-07
INUMBER OF SEQ ID NOS: 27
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 1
LENGTH: 20
TYPE: DNA
APPLICANTSM: Artificial Sequence
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                                                                                                                                                            ; ORGANISM: Artificial Sequence ; PEATURE; OTHER INFORMATION: Synthetic oligonucleotide US-09-415-142-1
                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US/09415142 Publication No. US20030026782A1 GENERAL INFORMATION:
                                                                                Matches
                                                                              20;
                           1 GGGGTCAACGTTCAGGGGGG
                                                                                Conservative
                                                                                           100.0%; Score 20; DB
100.0%; Pred. No. 2.3;
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20
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RESULT 2 US-09-931-583-1

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Title:
Perfect score:
Sequence:
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448.134 Million cell updates/sec
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gb_gss1::
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BX2537840

AV294749

AV772436

CG143495

BB629098

AQ414593

BH950547

CF398170

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1881	20174200	CF473420	7050	0199154	CF390498	CF386290	CF401770	BQ633853	CF389798	BX784262	BX253042	AA557077	AL751023	CF392026	CF476621	CF673102	AA556997	BG275515	CA354197	BF517774
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RESULT 1 BX678404/c LOCUS

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AR1561057
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AR135035 LOCUS DEFINITION ACCESSION VERSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE RESULT 1 AR096691 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL FEATURES 밁 5 ORIGIN Query Match Best Local (Matches Bource AR135035 Sequence 6 : AR135035 AR135035.1 Unknown. Unclassified. 1 (bases 1 to 15) 1 (bases, 1 to 15) Krieg, A.M., Klinman, D. and Steinberg, A.D. Immunomodulatory oligonucleotides ch 100.0%; Score 15; DB 6; Similarity 100.0%; Pred. No. 9.1e+02; 15; Conservative 0; Mismatches 0; 1 GCATGACGTTGAGCT 15 1 GCATGACGTTGAGCT 15 Unknown. Immunomodulatory oligonucleotides Patent: US 6008200-A 6 28-DEC-1999; Location/Qualifiers AR096691 Sequence 6 from patent US AR096691 Krieg, A.M. Unknown Unknown. AR096691.1 Unclassified. (bases 1 to 15) /organism="unknown" /mol_type="unassigned DNA" from patent US 6194388. GI:14123940 GI:10025709 15 bp 6008200. DNA DNA Length 15; Indels linear linear PAT 16-MAY-2001 PAT 08-SEP-2000 0 Gaps 0

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ALIGNMENTS

RESULT 1 AAV52553 Unmethylated CpG dinucleotide; immune response; bacterial meningitis; natural killer cell activation; NK cell; Th2 response; neonatal sepsis; pulmonary disorder; asthma; environmentally induced airway disease; bacterial infection; endotoxaemia; therapy; cystic fibrosis; 28-FEB-1997; 25-FEB-1998; 03-SEP-1998. WO9837919-A1. Synthetic. AAV\$2553 standard; DNA; 15 BP inflammatory Unmethylated CpG dinucleotide 1823. AAV52553; 20-NOV-1998 (first entry) bowel disease; ss. 97US-0039405P. 98WO-US003678

Schwartz DA, Krieg ¥.

(IOWA) UNIV IOWA RES FOUND.

WPI; 1998-480941/41.

Use of nucleic acids containing an unmethylated CpG - f subject having or at risk of having an acute decrement inhibiting an inflammatory response. for treating a t in air flow or

Example 4; Page 35; 65pp; English.

This sequence represents an unmethylated CpG dinucleotide, and can be used in the method of the invention. The method is for treating a subject having, or at risk of having an acute decrement in air flow, comprising administering a nucleic acid sequence containing at least one unmethylated CpG. The nucleic acids containing an unmethylated CpG dinucleotide affect an immune response in a subject by activating natural

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66, 86, 766	Sequence 5, Appli Sequence 60, Appl Sequence 80, Appl Sequence 83, Appl Sequence 739, App Sequence 756, App Sequence 806, App		<u> </u>

ALIGNMENTS

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Sequence 5, Application US/09824468
Patent No. US20020064515A1
GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Weiner, George
TITLE OF INVENTION: Methods and Products for INVENTION: Cytokines
FILE REFERENCE: C1039/7026/HCL
CURRENT APPLICATION NUMBER: US/09/824,468
CURRENT FILING DATE: 2001-04-02
PRIOR APPLICATION NUMBER: 09/286,098
PRIOR APPLICATION NUMBER: 09/286,098
PRIOR APPLICATION NUMBER: 09/286,098
PRIOR APPLICATION NUMBER: 09/286,098
PRIOR FILING DATE: 1999-04-02
NUMBER OF SEQ ID NOS: 105
SOPTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 5
LENGTH: 15
TYPE: DNA
ORGANISM: Artificial Sequence
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OTHER INFORMATION: Synthetic Sequence
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Local Similarity 100.0%;
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Pred. No. 1.7e+02;
); Mismatches 0;
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Perfect score:
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355 bp

mRNA

linear

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